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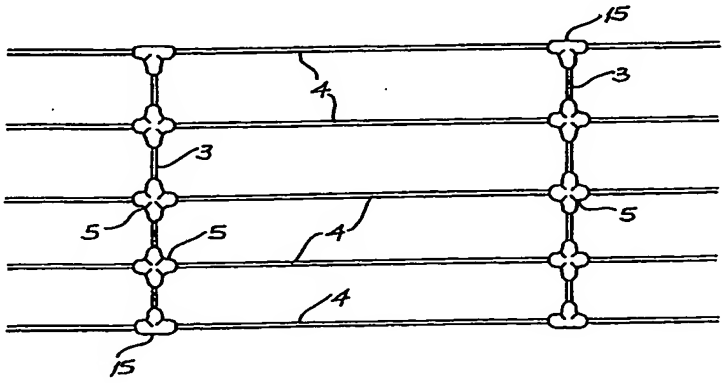
(54) Title: FABRICATED ELECTRIC FENCING



(57) Abstract

Fencing (1) comprising a plurality of horizontal wires (4), a plurality of vertical pickets (3) and a plurality of posts (2). A plurality of insulators (5) are located at the junctions of the horizontal wires (4) and vertical pickets (3) and act to clamp the horizontal wires (4) and pickets (3) into position thereby providing insulation therebetween. The fencing (1) is pre-fabricated and is erected on site by securing the horizontal wires (4) to the posts (2). Some or all of the horizontal wires (4) and pickets (3) are able to be electrified to meet control requirements.

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FABRICATED ELECTRIC FENCING

This invention relates to a new and improved electric fencing system or structure, in particular to a prefabricated electric fence which is easy to erect and has versatility in appropriate height and mesh spacings to meet various control requirements.

BACKGROUND ART

Over recent years, the use of electrified fencing has become more prevalent in the fencing for stock and other uses. The most usual method of constructing such electrical fencing is that some of the horizontal strands of wire are electrified with a high voltage, low current, pulsed electric power supply. In constructing such a fence, the posts either have insulators to hold the current carrying wires or must be insulated themselves. A problem exists with the vertical droppers which are to provide strength and shape to the fence. The droppers must be insulated from the current carrying wires.

To construct such electric fencing, involves a number of different parts which must be erected on site. The erection is highly labour intensive and therefore the cost of builiding such fencing insures that the economics of such fencing puts it into the range where it is used when the enclosed stock or crops are highly valuable.

U.S. Patent 2,530,247 to Koonz generally discloses a wire electric fence fabric having selected horizontal strands electrically insulated.

The type of fencing described above lacks strength in that the pickets are not one piece similar to a woven pattern such as Cyclone Ringlock prefabricated fences. Such a woven pattern enables less droppers and posts to be used thereby also reducing the cost of the fence.

OBJECT OF THE INVENTION

An important object of this invention is to provide a regularly manufactured prefabricated electric fencing system or structure of consistent quality which in the preferred embodiment the horizontal wires are electrically insulated from the one piece vertical wires or pickets which provide strength and stability to the fence.

Another important object of this invention is to provide a range of prefabricated fences which will, by virtue of the varying height and mesh relationship be particularly suited to various specific control requirements.

Another important object of this invention is that it can be used with a variety of posts and post insulators, and, a variety of end strainers and end insulators.

DISCLOSURE OF THE INVENTION

According to one aspect of the present invention there is disclosed a fencing comprising a plurality of substantially horizontal wires for carrying electric current, a plurality of vertical pickets insulated from at least one said horizontal wires, wherein said fencing is prefabricated prior to erection on site with said pickets being clamped with insulators and spaced apart from said plurality of horizontal wires.

Other objects and advantages of this invention will become apparent with disclosures in the accompanying specifications and drawings in which:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of fencing of a preferred embodiment,

Fig. 2 is a detailed front view of the fencing of Fig. 1,

Fig. 3 is a perspective view of an insulator used in the fencing of Fig. 1,

Fig. 4 is a lateral cross-sectional view of part of the fencing of Fig. 1,

Fig. 5 is an exploded perspective view of another embodiment of an insulator able to be used with the fencing of Fig. 1,

Fig. 6 is a perspective view of another embodiment of fencing, and

Fig. 7 is a detailed front view of the fencing of Fig. 6.

BEST MODE OF CARRYING OUT THE INVENTION

The fencing as illustrated in Figure 1 comprises a plurality of substantially horizontal wires 4 which can be either active, negative, or neutral depending on the particular requirements of the fencing 1. In the particular fencing 1 illustrated in Fig. 1 every second horizontal wire is active or live whilst the alternative horizontal wires are either neutral or earth return. Also seen in the fencing is a plurality of posts 2 which secure the fencing 1 into position and also a plurality of vertical dropper wires, or pickets 3. These dropper wires 3 are continuous and add strength to the fencing structure 1. The dropper wires are not electrified in the fencing structure 1 as illustrated in Fig. 1.

The insulator 5 is at the junction of wires 3 and 4 electrically insulating one from the other and fixedly clamps the picket 3 into position

whereby the picket 3 is immovable in relation to the insulator 5. The insulator 5 also firmly clamps wire 4 into position whereby the linear alignment of the picket 3 can be adjusted if required.

Figure 2 shows an enlarged perspective view of the fence structure 1 illustrated in Fig. 1.

Figure 3 shows a perspective drawing of one embodiment of the insulator 5 which is moulded in position at the junction of wire 4 and the picket 3.

Figure 4 shows a vertical sectional view through the fencing structure showing the continuous picket 3, the horizontal wires 4, the insulators 5 which occur at the junctions of the wire 4 and the picket 3, and the insulator 15 which occurs at the junction of the ends of the picket 3 and the top and bottom horizontal wires 4. Also shown is the one embodiment of the enclampment 14 of the end of the picket 3 in the end insulator 15, which is a deformation of the ends of the picket 3.

Figure 5 shows a perspective drawing of another embodiment of the insulator 5 which comprises three sections and is shaped like a disc with two end sections 6 and centre section 7 being held together by fasteners 8 which pass through sections 6 and 7. The middle section 7 has four bosses 9 on each side of the disc which mate with four recesses 10 in the end sections 6 thereby locating the end sections 6 relative to the centre section 7. The centre section 7 also has a centrally located protrusion 11 on each side which mates with a corresponding recess 12 in the end sections 6. When sections 6 and 7 are clamped together with the fasteners 8 the wire 4 and the picket 3 are idented by the action of the protrusion 11 against the recess 12. Due to the indentation the wire 4 and the picket 3 are substantially immovable.

The end section 6 has a groove 13 cut into the face which receives the wire 4 and the picket 3.

The fencing as illustrated in Figure 6 is another embodiment of the fencing shown in Figure 1 and comprises a plurality of substantially horizontal wires 4 which can be either active, negative, or neutral depending on the particular requirements of the fencing 16. In the particular fencing 16 illustrated in Fig. 6, the picket 3 is electrically connected to the top and bottom of the horizontal wires 4 so that the pickets 3 can be either active or live, or neutral or earth return as required in the fencing structure 16.

Figure 7 shows an enlarged perpsective view of the fencing structure 16 shown in Figure 6. In particular this figure shows one embodiment of the end connection of the pickets 3 to the top and bottom horizontal wires 4 which achieves both an electrical and firm connection of the pickets 3 to the wires 4.

INDUSTRIAL APPLICABILITY

The prefabricated electric fencing enables the fencing to be installed in a time efficient manner, and the woven nature of the fencing provides a physical barrier as well as an electrical barrier. The adjustment of the wires within the insulators allows the fencing to be easily adjusted for the slope of land on which the fencing is being installed.

CLAIMS

1. Fencing comprising a plurality of substantially horizontal wires for carrying electric current, a plurality of vertical pickets insulated from a least one said horizontal wires, wherein said fencing is prefabricated prior to erection on site with said pickets being clamped with insulators and spaced apart from said plurality of horizontal wires.

2. Fencing as claimed in claim 1 wherein the vertical pickets are insulated from all the plurality of said horizontal wires.

3. Fencing as claimed in claim 2 wherein said insulator fixedly clamps said picket in position while said plurality of horizonal wire are able to be moved within said insulator.

4. Fencing as claimed in claim 3 wherein the ends of said pickets are clamped into postion into said insulator.

5. Fencing as claimed in claim 1 wherein said vertical pickets are electrically connected to at least one horizontal wire.

6. Fencing as claimed in claim 2 or claim 5 wherein said vertical pickets are made of metal wire.

7. Fencing as claimed in claim 1 wherein said vertical pickets are made from an insulated material.

8. Fencing as claimed in claim 6 or claim 7 wherein a plurality of insulated posts supports said fencing.

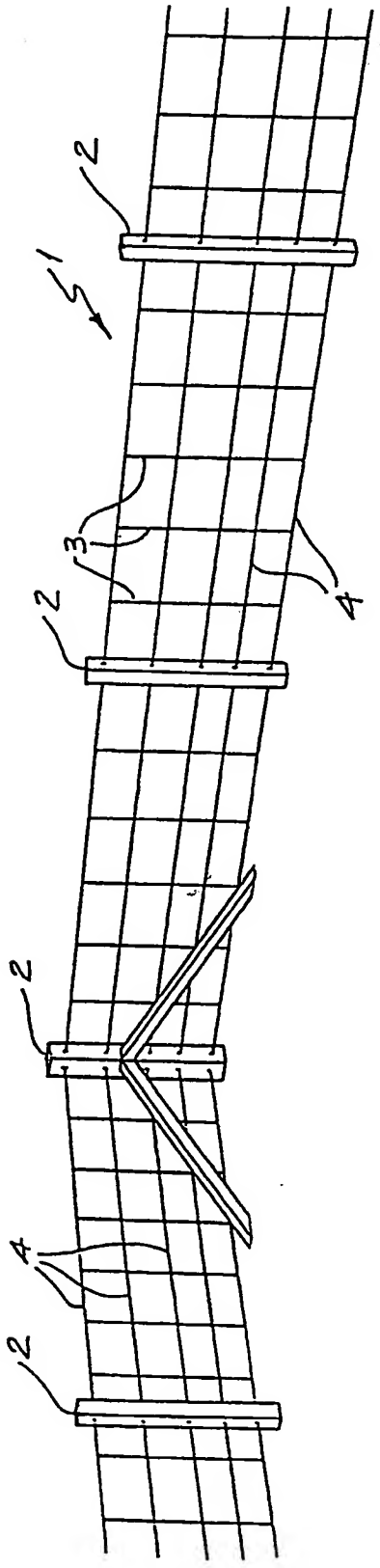


FIG. 1

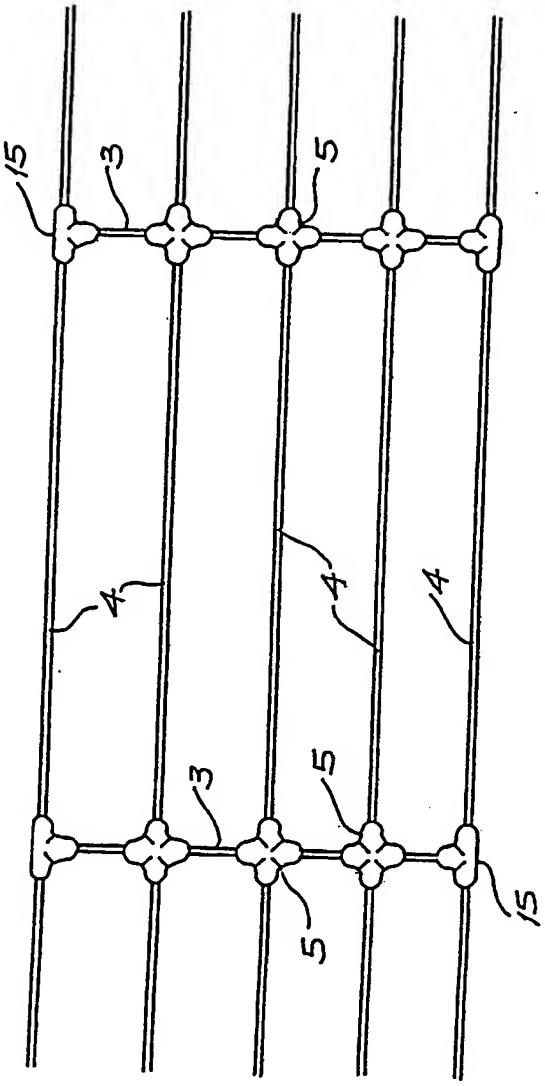


FIG. 2

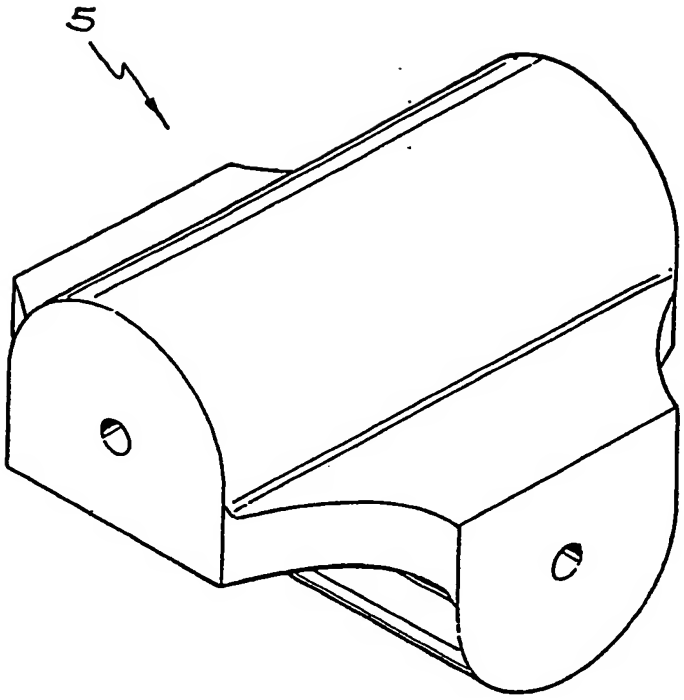


FIG. 3

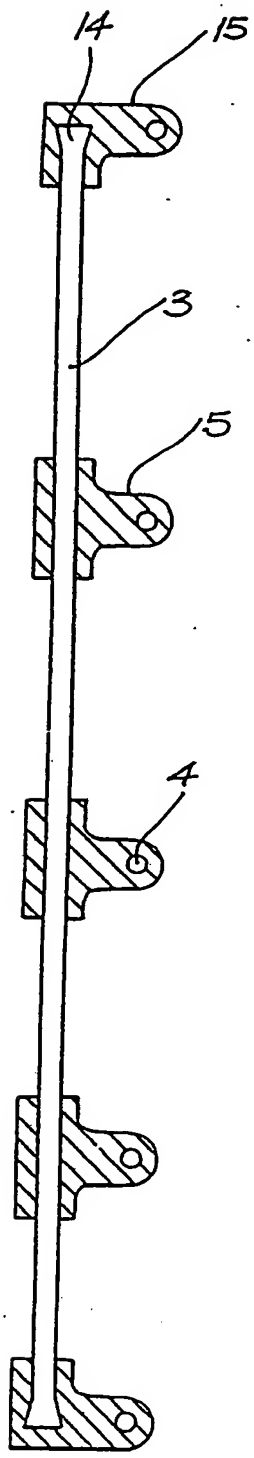
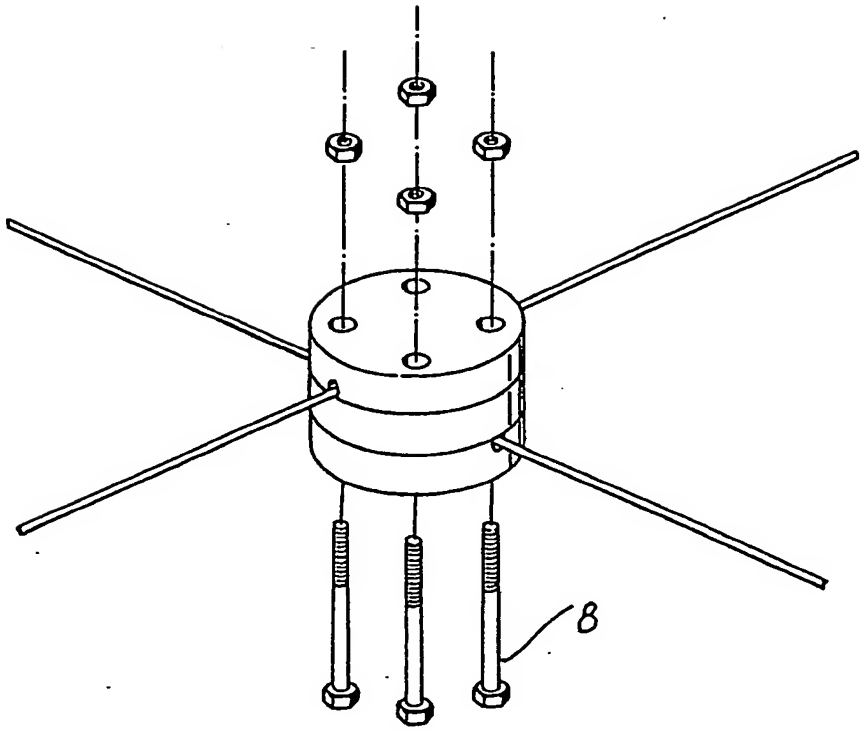


FIG. 4



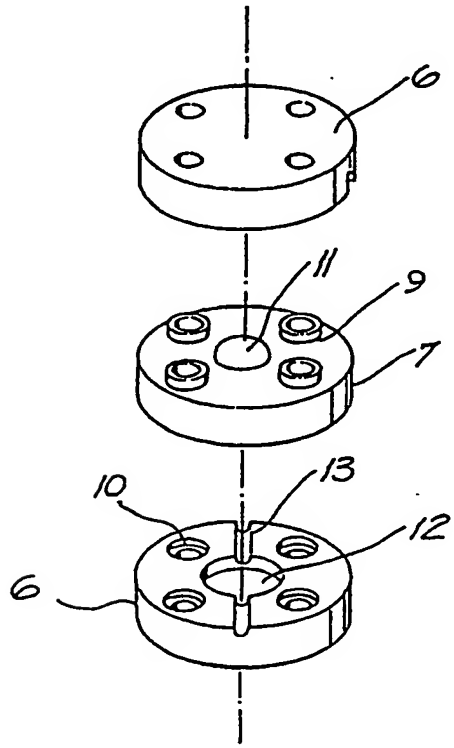


FIG. 5

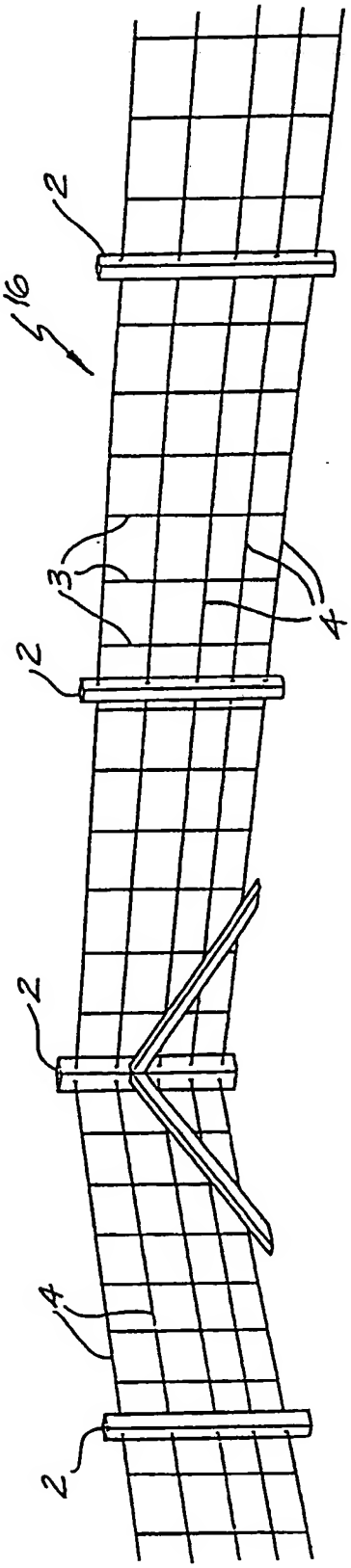


FIG. 6

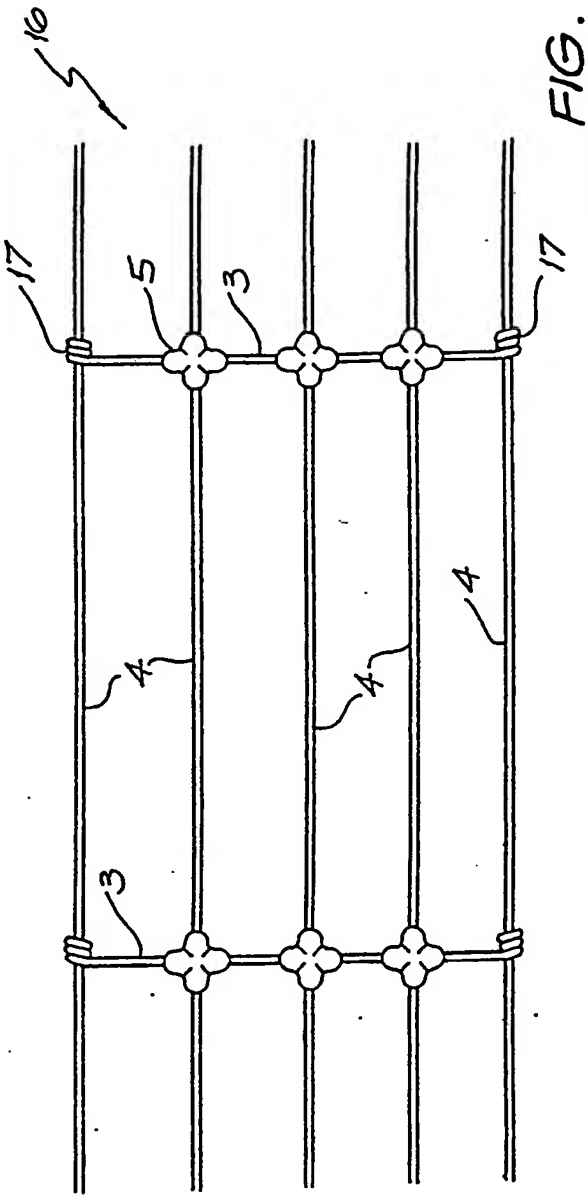


FIG. 7

INTERNATIONAL SEARCH REPORT

International Application No. PCT/AU 89/00499

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) 6

According to International Patent Classification (IPC) or to both National Classification and IPC

Int. Cl.[4] A01K 3/00

II. FIELDS SEARCHED

Minimum Documentation Searched 7

Classification System	Classification Symbols
IPC	A01K 3/00

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched 8

AU IPC as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT 9

Category*	Citation of Document, 11 with indication, where appropriate, of the relevant passages 12	Relevant to Claim No 13
X	FR,A, 2445105 (SOCIETE C F C E - C A P E M COMPAGNIE FRANCAISE DE LA CLOTUR ELECTRIQUE) 25 July 1980 (25.07.80)	

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IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
16 February 1990 (16.02.90)	() 22/02/90
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